AQUATIC PLANT MANAGEMENT STRATEGY

The following management strategies were developed for each identified problem area considered eligible for public funding. Planned expenditures are based on known available federal funds, estimated state funds and anticipated local support as of the date of this plan. For water bodies in which final funding is inadequate to conduct all proposed control operations, the extent of control will be reduced and priority areas and target plants will be determined by the Department of Natural Resources in cooperation with the local sponsor. A summary of proposed expenditures for 2006 and a location map of problem water bodies are located at the end of this section.

1. Back River Reservoir

(Berkeley County)

1. Problem plant species

Hydrilla	Water hyacinth
Brazilian elodea	Fanwort
Water primrose	Cutgrass

2. Management objectives

   a. Reduce water hyacinth and water primrose populations throughout the lake to enhance public access, navigation, water flow and minimize impacts to water intakes from floating islands.

   b. Reduce hydrilla in upper Foster Creek area to improve water quality, waterflow and navigation.

   c. Reduce hydrilla and fanwort in 60 acre area adjacent to SCE&G Williams Station intake to enhance water flow, minimize clogging of water intake, and enhance public boating and fishing use in this area.

   d. Reduce hydrilla and fanwort at Bushy Park Landing to enhance public boating and fishing use in this area.

3. Selected control method

Problem Species	Control Agent
Water hyacinth	Renovate 3, Reward
Water primrose, Cutgrass	Renovate 3, Reward, Habitat
Hydrilla, Brazilian elodea	Chelated copper*, Chelated copper*/Reward
Fanwort	Endotholl

*** May be toxic to fish at recommended treatment rates; however, precautions will be implemented to minimize the risk of fish kills**.

4. Area to which control is to be applied

Renovate 3, Reward - 300 acres of water hyacinth throughout the lake.

Habitat - 150 acres of water primrose and cutgrass throughout the lake.

Chelated copper, Chelated copper*/Reward - 185 acres of hydrilla (3 treatments of 60 acre area near SCE&G intake, 5 acres of hydrilla adjacent to Bushy Park Landing).

Chelated copper, Chelated copper*/Reward - 40 acres of hydrilla in Foster Creek arm (2 treatments - 20 acres each).

Endotholl - 5 acres of fanwort adjacent to Bushy Park Landing.

5. Rate of control agents to be applied

Renovate 3 - 0.5 - 0.75 gallons per acre

Reward - 0.5 gallon per acre.

Chelated copper - up to 1 ppm (about 16 gallons per acre).

Chelated copper*/Reward - 4 gallons /2 gallons per acre

Habitat - up to 4 pints per acre/up to 6 pints per acre.

Endotholl - up to 7 gallons per acre.

6. Method of application of control agents

Renovate 3, Reward, Habitat - spray on surface of foliage with appropriate surfactant.

Chelated copper, Chelated copper*/Reward, Endotholl - subsurface injection from airboat.

7. Timing and sequence of control application

Three hundred (300) acres of water hyacinths treated with Renovate 3(May-July), Reward(July-October). The initial treatments are to be followed in 1-2 days with a cleanup treatment.

One Hundred fifty (150) acres of water primrose and cutgrass treated with Habitat during the growing season(May-October).

20 acres of hydrilla in Foster Creek to be treated 2 times (April-October) with Chelated copper, Chelated copper*/Reward.

Hydrilla and fanwort located adjacent to public boat ramp to be treated with chelated copper, endotholl.

Hydrilla located near the SCE&G water intake to be treated periodically during the year with Chelated copper, Chelated copper*/Reward (up to three times in

the same 60 acre area), treatment area may be expanded as control is realized in target area.

8. Other control application specifications

Herbicide used only upon approval by the S.C. Department of Health and Environmental Control.

Renovate 3 treatments conducted within 1600 feet of the CPW water intake will use a rate of 0.5 gallons per acre or less. Reward treatments will be conducted at least 1600 feet from the intake. Following any application of Reward within 1600 feet of the CPW water intake, herbicide residue concentrations may be monitored according to a plan agreed to by the S.C. Department of Natural Resources, Charleston Commissioners of Public Works(CPW), and the Department of Health and Environmental Control.

If filamentous algae is present on submersed macrophytes, an algacide, such as K-TEA, will be used in addition to selected herbicides to assist in control.

Control is to be applied in a manner that will not significantly degrade water quality in the treatment area. This may involve treating only a portion of the area at any one time.

9. Entity to apply control agents

Commercial applicator

10. Estimated cost of control operations

$108,135

11. Potential sources of funding

Water primrose and water hyacinths -

Charleston Commissioners of Public Works 30%
S.C. Electric and Gas Co. 20%
U.S. Army Corps of Engineers 0%
S. C. Department of Natural Resources 50%

(Percentage of match subject to change based on availability of Federal and State funding.)

Hydrilla and Cabomba (near SCE&G intake) -

South Carolina Electric and Gas Co. 50%
U.S. Army Corps of Engineers 0%
S. C. Department of Natural Resources 50%

(Percentage of match subject to change based on availability of Federal and State funding.)

Hydrilla (Foster Creek, boat ramp, and Back River) -

Charleston Commissioners of Public Works 30%
S.C. Electric and Gas Co. 20%
U.S. Army Corps of Engineers 0%
S. C. Department of Natural Resources 50%

(Percentage of match subject to change based on availability of Federal and State funding.)

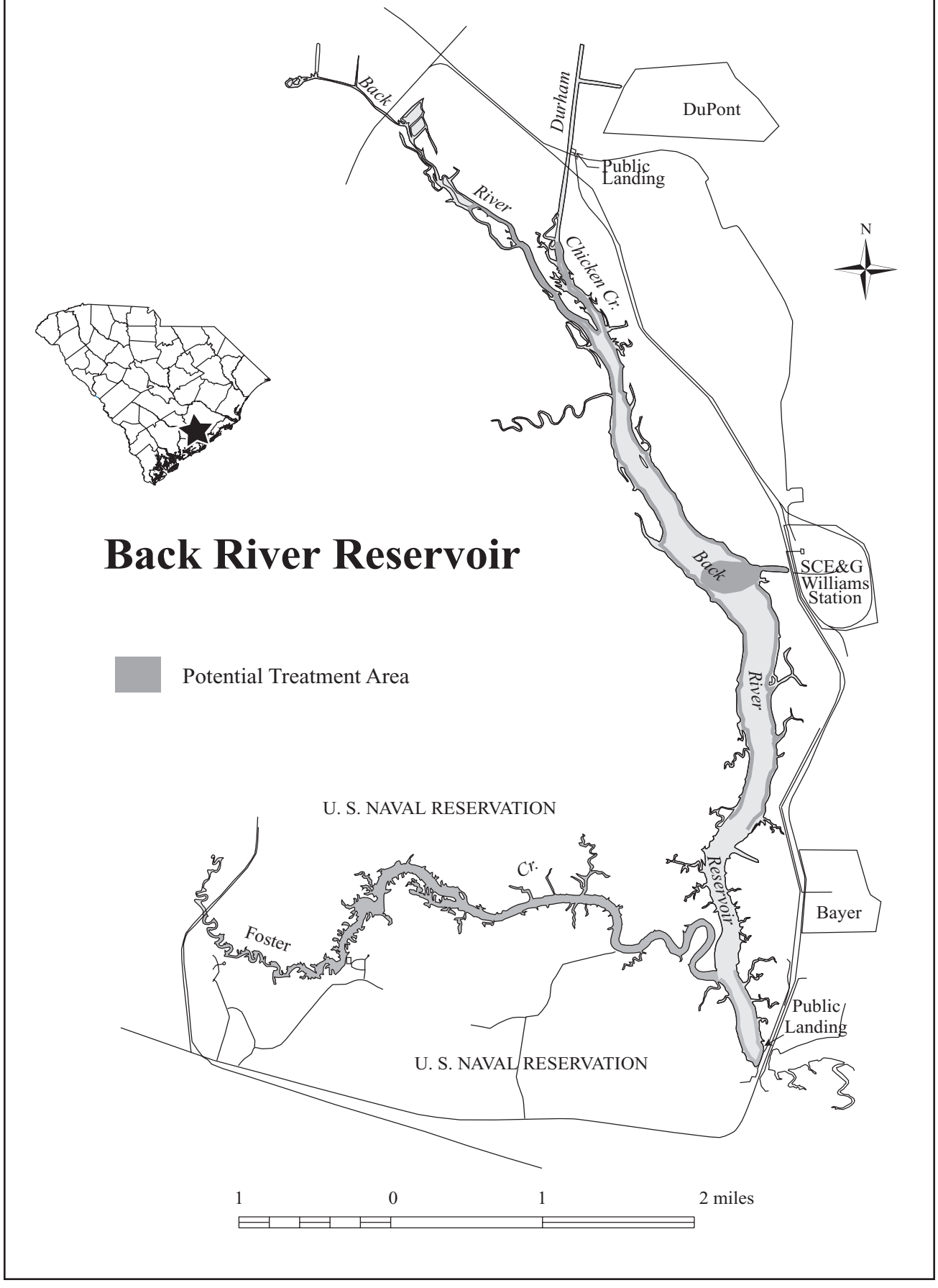
12. Long term management strategy

a. Manage the distribution and abundance of nuisance aquatic plant populations at levels that minimize adverse impacts to water use activities and the environment through the use of federal and state approved control methods.

b. Maintain or enhance native aquatic plant populations at levels beneficial to water use, water quality, and fish and wildlife populations through selective control of nuisance plant populations where feasible, introduction of native plant species where appropriate, and public education of the benefits of aquatic vegetation in general.

c. Seek to prevent further introduction and distribution of problem species through public education, posting signs at boat ramps, regular surveys of the water body, and enforcement of existing laws and regulations.

d. Effective long term control of water hyacinth in the reservoir must also include control of this species in the Cooper River to which the reservoir is connected.


Back River Reservoir
Potential Treatment Area
Back River
Durham
DuPont
Public Landing
Chicken Cr.
N
SCE&G Williams Station
Back River
U. S. NAVAL RESERVATION
Foster Cr.
Reservoir
Bayer
Public Landing
U. S. NAVAL RESERVATION
1 0 1 2 miles

2. Bauruch Institute
(Georgetown County)

1. Problem plant species

   Phragmites

2. Management objective

   Through a comprehensive, multi-year approach; reduce Phragmites populations to the greatest extent possible

3. Selected control method

Problem Species	Control Agent
Phragmites	Habitat

4. Area to which control is to be applied

   100 acres of phragmites throughout area

5. Rate of control agent to be applied

   Habitat - 2 - 6 pints per acre.

6. Method of application of control agent

   Helicopter - 100 acres of Habitat applied to phragmites.

   Other applications - Spray on surface of foliage with appropriate surfactant.

7. Timing and sequence of control application

   Apply when plants are actively growing (July - Sept.).

9. Entity to apply control agent

   Commercial applicator

10. Estimated cost of control operations

    $18,238

11. Potential sources of funding

    Baruch Institute 50%

    U.S. Army Corps of Engineers 0%

    S. C. Department of Natural Resources 50%

(Percentage of match subject to change based on availability of Federal and State funding.)

12. Long term management strategy

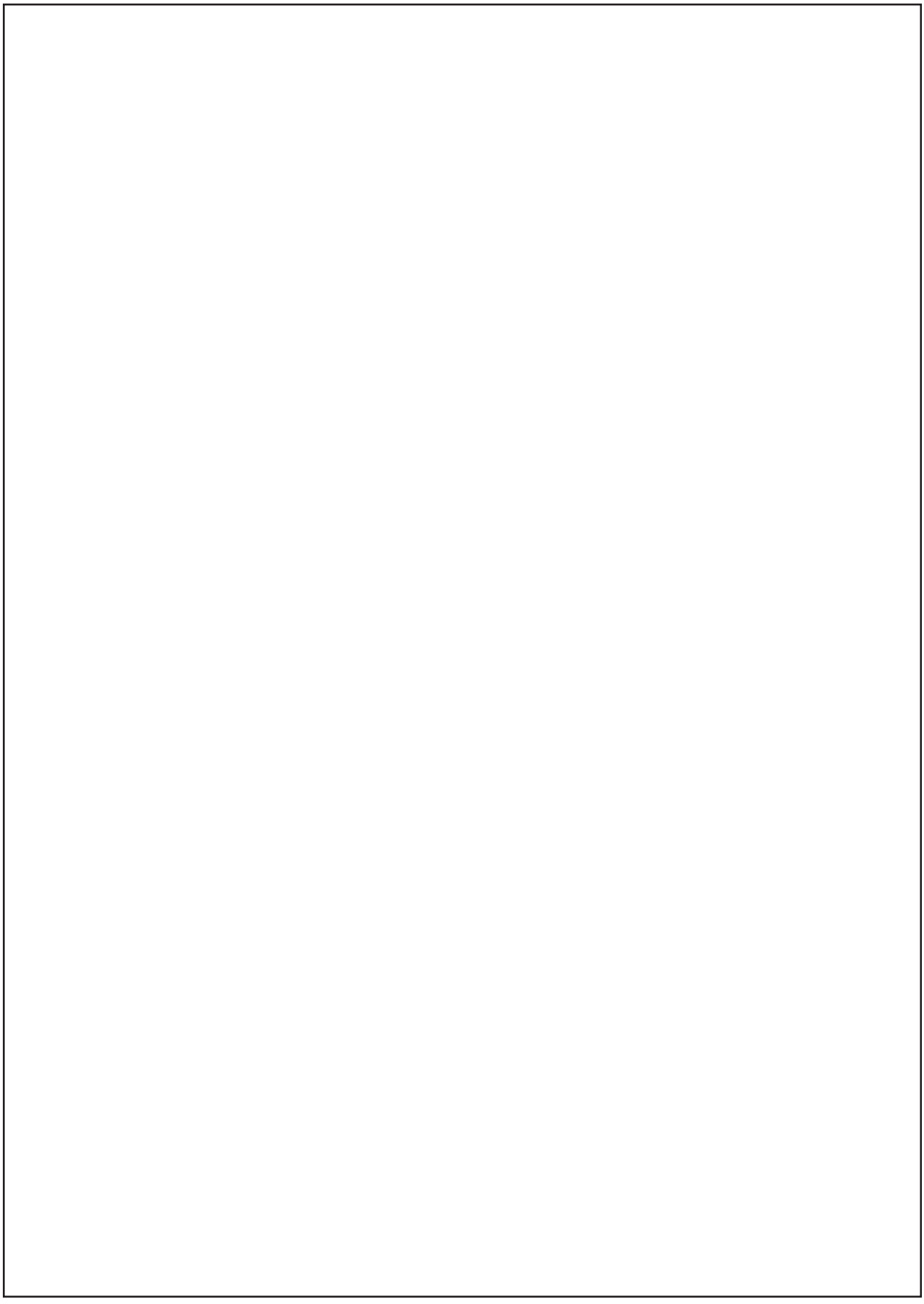
    a. Manage the distribution and abundance of nuisance aquatic plant

populations at levels that minimize adverse impacts to water use activities and the environment through the use of federal and state approved control methods.

b. Maintain or enhance native aquatic plant populations at levels beneficial to water use, water quality, and fish and wildlife populations through selective control of nuisance plant populations where feasible, introduction of native plant species where appropriate, and public education of the benefits of aquatic vegetation in general.

c. Seek to prevent further introduction and distribution of problem species through public education, posting signs at boat ramps, regular surveys of the water body, and enforcement of existing laws and regulations.

d. Continue to coordinate treatment areas with local conservation groups.



3. Black Mingo Creek

(Georgetown County)

1. Problem plant species

Alligatorweed	Parrot feather
Frog's bit	Pennywort

2. Management objective

Reduce or remove nuisance weed infestation at public access points, the main river channel, and connecting lakes to improve water quality and navigation.

3. Selected control method

Problem Species	Control Agent
Alligatorweed, Pennywort	Renovate 3, Habitat
Frog's bit, Parrot feather	Reward

4. Area to which control is to be applied

30 acres of problematic plants throughout river

5. Rate of control agent to be applied

Reward - 0.5 gallon per acre.

Renovate 3 - 0.5-0.75 gallons per acre.

Habitat - 2-3 pints per acre.

6. Method of application of control agent

Spray on surface of foliage with appropriate surfactant.

7. Timing and sequence of control application

Apply when plants are actively growing (May - Oct.).

9. Entity to apply control agent

Commercial applicator

10. Estimated cost of control operations

$3,167

11. Potential sources of funding

Georgetown County 50%

U.S. Army Corps of Engineers 0%

S. C. Department of Natural Resources 50%

(Percentage of match subject to change based on availability of Federal and State funding.)

12. Long term management strategy

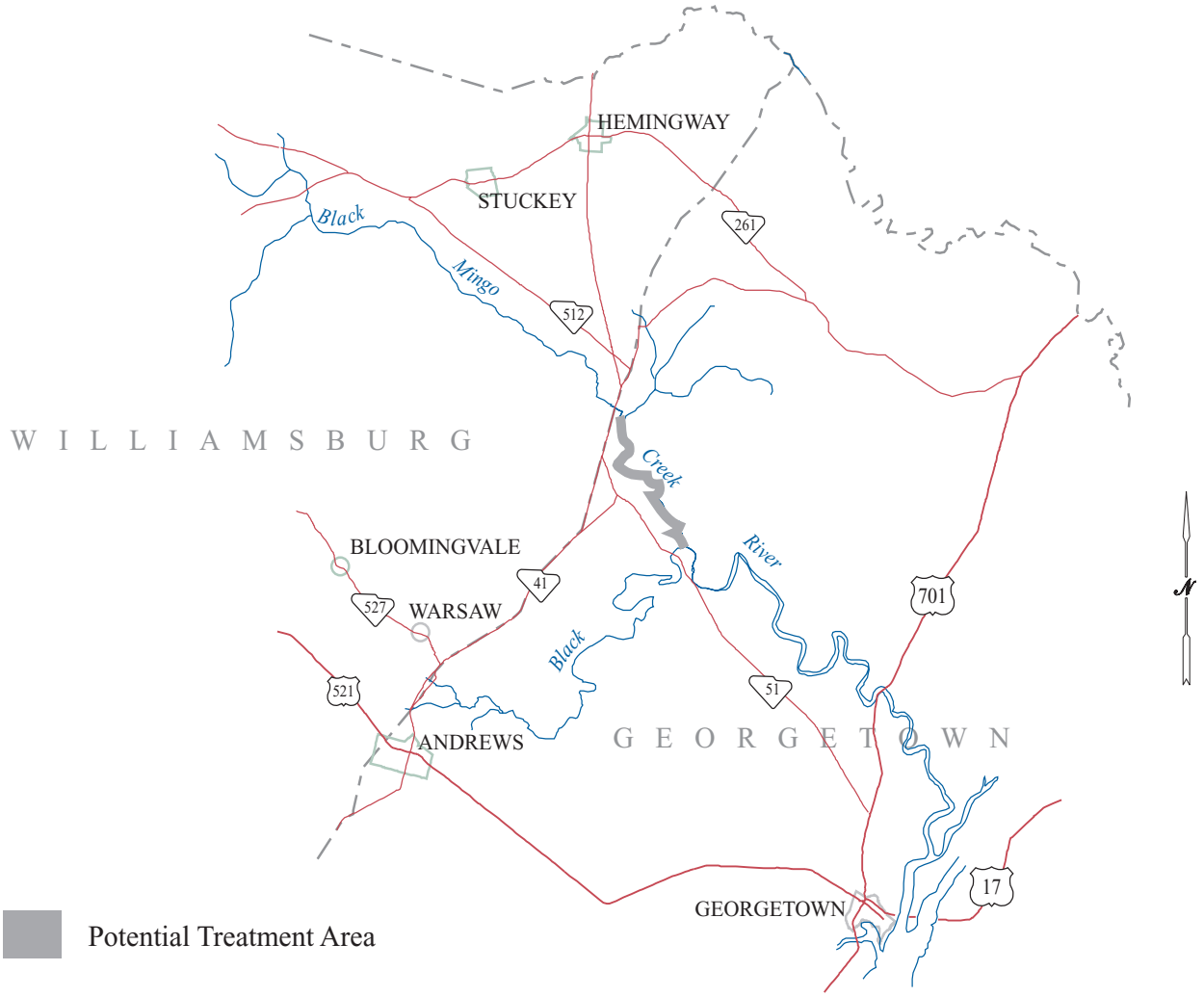
a. Manage the distribution and abundance of nuisance aquatic plant populations at levels that minimize adverse impacts to water use activities and the environment through the use of federal and state approved control methods.

b. Maintain or enhance native aquatic plant populations at levels beneficial to water use, water quality, and fish and wildlife populations through selective control of nuisance plant populations where feasible, introduction of native plant species where appropriate, and public education of the benefits of aquatic vegetation in general.

c. Seek to prevent further introduction and distribution of problem species through public education, posting signs at boat ramps, regular surveys of the water body, and enforcement of existing laws and regulations.

d. Continue to coordinate treatment areas with local conservation groups.

Black Mingo Creek



4. Black River

(Georgetown County)

1. Problem plant species

Alligatorweed	Parrot feather
Frog's bit	Pennywort

2. Management objective

Reduce or remove nuisance weed infestation at public access points, the main river channel, and connecting lakes to improve water quality and navigation.

3. Selected control method

Problem Species	Control Agent
Alligatorweed, Pennywort	Renovate 3, Habitat
Frog's bit, Parrot feather	Reward

4. Area to which control is to be applied

30 acres of problematic plants throughout river

5. Rate of control agent to be applied

Reward - 0.5 gallon per acre.

Renovate 3 - 0.5-0.75 gallons per acre.

Habitat - 2-3 pints per acre.

6. Method of application of control agent

Spray on surface of foliage with appropriate surfactant.

7. Timing and sequence of control application

Apply when plants are actively growing (May - Oct.).

8. Other control application specifications

None

9. Entity to apply control agent

Commercial applicator

10. Estimated cost of control operations

$3,167

11. Potential sources of funding

Georgetown County 50%

U.S. Army Corps of Engineers 0%

S. C. Department of Natural Resources 50%

(Percentage of match subject to change based on availability of Federal and State funding.)

12. Long term management strategy

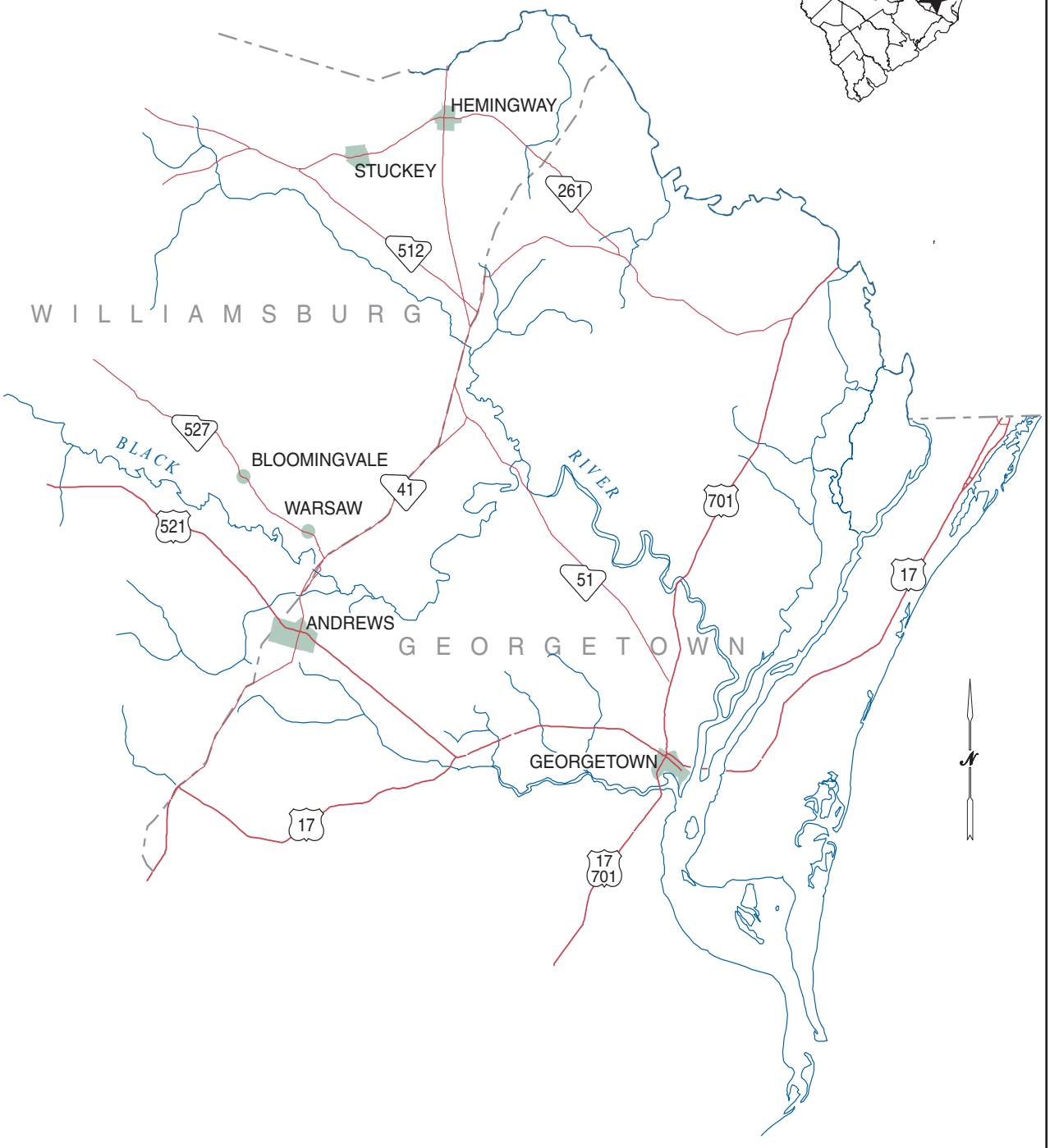
a. Manage the distribution and abundance of nuisance aquatic plant populations at levels that minimize adverse impacts to water use activities and the environment through the use of federal and state approved control methods.

b. Maintain or enhance native aquatic plant populations at levels beneficial to water use, water quality, and fish and wildlife populations through selective control of nuisance plant populations where feasible, introduction of native plant species where appropriate, and public education of the benefits of aquatic vegetation in general.

c. Seek to prevent further introduction and distribution of problem species through public education, posting signs at boat ramps, regular surveys of the water body, and enforcement of existing laws and regulations.

d. Continue to coordinate treatment areas with local conservation groups and State Scenic Rivers Coordinator.

Black River


HEMINGWAY
STUCKEY
261
512
WILLIAMSBURG
527
BLACK
BLOOMINGVALE
41
RIVER
WARSAW
521
701
51
17
ANDREWS
GEORGETOWN
GEORGETOWN
17
17
701
N
5 0 5 10 15 Miles

5. Bonneau Ferry

(Berkeley County)

1. Problem plant species

Water Primrose	Water hyacinth	Cattails
Lotus	Cutgrass	Pennywort
Frog's bit	Parrotfeather	

2. Management objective

Reduce nuisance plant populations to the greatest extent possible throughout Bonneau Ferry impoundments to enhance water quality, water flow, waterfowl habitat, fishing, and hunting opportunities.

3. Selected control method

Problem Species	Control Agent
Water primrose, Pennywort	Renovate 3, Habitat
Cattails, Cutgrass, Parrotfeather	Habitat
Water hyacinth, Frog's bit	Renovate 3, Reward

4. Area to which control is to be applied

50 acres of problematic plants throughout the reserves and impoundments of Bonneau Ferry.

5. Rate of control agent to be applied

Habitat - 2-3 pints per acre.
Reward - 2 quarts per acre.
Renovate 3 - up to 4 quarts per acre.

6. Method of application of control agent

Helicopter - 25 acres of Habitat mix with appropriate surfactant.

Other applications - Spray on surface of foliage with appropriate surfactant from boat..

7. Timing and sequence of control application

Apply when plants are actively growing.

8. Other control application specifications

None

9. Entity to apply control agent

Commercial applicator

10. Estimated cost of control operations

    $13,083

11. Potential sources of funding

    S. C. Department of Natural Resources 100%

(Percentage of match subject to change based on availability of Federal and State funding.)

12. Long term management strategy

    a. Manage the distribution and abundance of nuisance aquatic plant populations at levels that minimize adverse impacts to water use activities and the environment through the use of federal and state approved control methods.

    b. Maintain or enhance native aquatic plant populations at levels beneficial to water use, water quality, and fish and wildlife populations through selective control of nuisance plant populations where feasible, introduction of native plant species where appropriate, and public education of the benefits of aquatic vegetation in general.

Bonneau Ferry